



**HOUSTON
SPACEPORT**



**THE MISSION OF THE HOUSTON SPACEPORT IS TO
CREATE A FOCAL POINT FOR AEROSPACE
INNOVATION WITH A CLUSTER OF AEROSPACE
COMPANIES THAT WILL LEAD THE NATION IN THE
TRANSITION FROM A GOVERNMENT-DRIVEN TO A
COMMERCIAL-DRIVEN SPACE PROGRAM.**



HOUSTON SPACEPORT STATUS

- Approaching 4 years since FAA-AST certified the Houston Spaceport.
- HASC is now home to Intuitive Machines' commercial lunar lander development, as well as their UAV program.
- HAS and San Jacinto College finalizing an agreement to begin operations of the San Jacinto College EDGE Center for advancing technology. Program to start June 2019.
- State of the art new ATCT with capability to host space mission control is now complete.

HOUSTON SPACEPORT STATUS

INTUITIVE MACHINES

Lunar Lander prototype built with the help of 7 San Jacinto Student Interns



HOUSTON SPACEPORT STATUS

INTUITIVE MACHINES

Intuitive Machines invents hardware and software solutions for businesses that can benefit from varying degrees of autonomy in their systems, processes, and operations.

Intuitive Machines has been solving significant challenges across multiple industries including Aerospace, and Energy, providing solutions in intelligent autonomous systems, including complex computational modeling, simulations, and digital analytics.

Specifically, at Houston Spaceport, Intuitive Machines is:

- Developing lunar landing space systems including propulsion systems
- Producing long range fixed wing drones
- Manufacturing stainless steel parts using revolutionary additive manufacturing processes

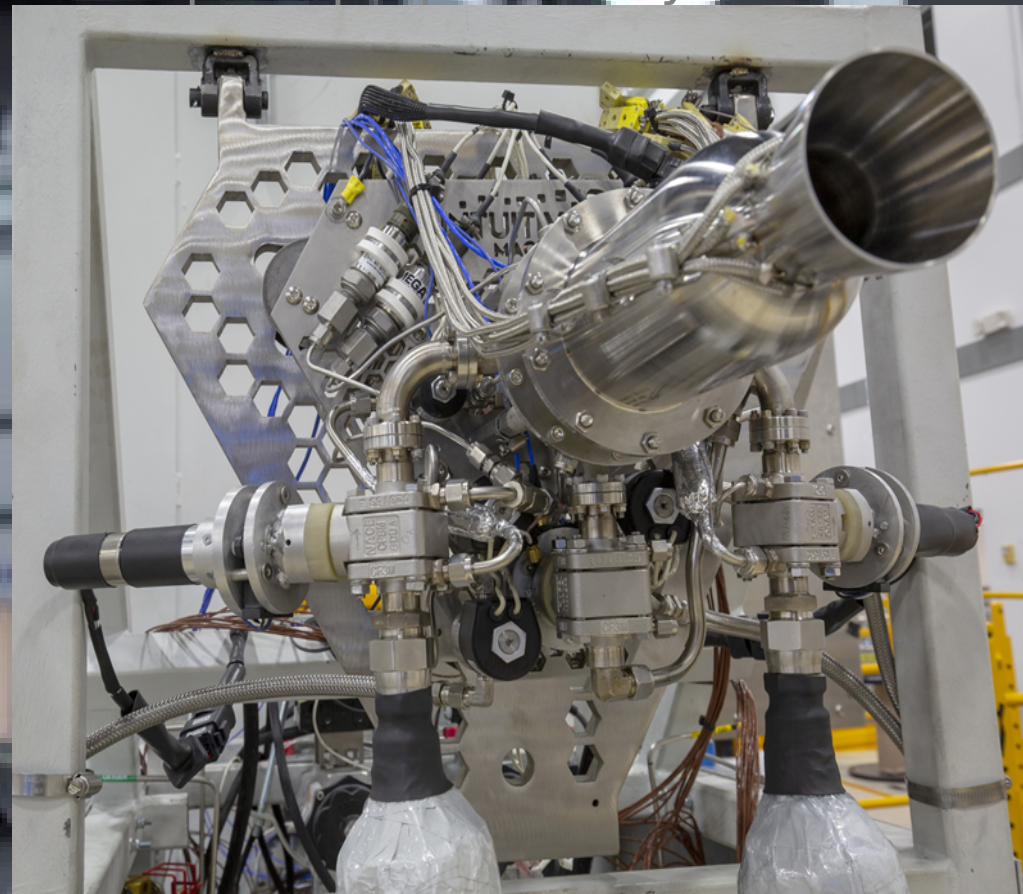


HOUSTON SPACEPORT STATUS

INTUITIVE MACHINES – SPACE SYSTEMS

Intuitive Machines is developing and testing its LOX-Methane In-Space propulsion System

This system is being developed concurrently at Houston Spaceport, with Intuitive Machines' Nova-C Lunar Lander



HOUSTON SPACEPORT STATUS

INTUITIVE MACHINES – AIRBORNE SYSTEMS

Intuitive Machines produces the Tiburon Junior at Spaceport Houston.

Tiburon Jr. is an all carbon composite fixed wing aircraft that has a range of well over 1000 miles

Can be outfitted for a wide variety of missions:

Pipeline Inspection
Wildlife Management
Powerline Inspection
Wildfire Management
Precision Agriculture

2019 **TIBURON JR.**

Going the extra mile.
Select your Mission Kit

BASE KIT

operation range 375 miles



TIBURON JR. MISSION KITS

FIRE & EMERGENCY MANAGEMENT



- CIBAL
- INFRARED DETECTOR
- LASER DESIGNATOR AND
- VHF RADIO

PIPELINE & POWER LINE



- LIDAR
- PHOTOS & VIDEOS
- INFRARED DETECTOR

AGRICULTURE



- MULTI SECTION IMAGER
- PHOTOS & VIDEOS
- INFRARED DETECTOR

WILDLIFE & GAME MANAGEMENT



- MULTI SECTION IMAGER
- THERMAL IMAGER
- OPTICAL VIDEO
- INFRARED DETECTOR

HOUSTON SPACEPORT STATUS

INTUITIVE MACHINES



ADDITIVE MANUFACTURING & DESIGN



ADDITIVE MANUFACTURING TO INCLUDE GENERATIVE DESIGN & TOPOLOGY OPTIMIZATION

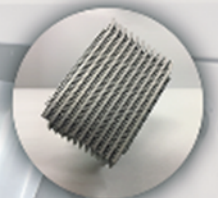
IM Additive Manufacturing and Design is strategically placed to support business opportunities in aerospace, Department of Defense, oil and gas, and other strategic applications

IM'S PRODUCT AND BUILD STRATEGY OFFERINGS:

- Density > 99% of theoretical limit
- 20 Micron layer repeatability on all 3 axes
- Uniformity exceeding castings
- Ability to design for additive
- Solidification rates as high as 25 cc/hr.
- Minimized support requirements – reduce post processing
- Powder grain sizes to 3 micron
- Surface finish – 5 Ra micrometers (w/o refinish)

MORE THAN 15 MATERIALS SUCCESSFULLY PROCESSED

- Steel: CrCo, Inconel, Al and Ti alloys
CoCr ASTM75, H13 Tool Steel
- Titanium: TiAl6V4, TiAl6Nb7
- Stainless Steel: 316L
- Aluminum: AlSi12Mg; AlSi10Mg
- Copper
- Exotics



HOUSTON SPACEPORT STATUS

CONTINUED

- Infrastructure construction is now underway. We are opening 154 acres for immediate development.

Scheduled milestones:

- ✓ Notice to proceed - November 26, 2018
 - ☐ Construction start - April 19, 2019
 - ☐ Ground breaking ceremony - April 25, 2019
 - ☐ Substantial Completion - May 7, 2020
- Secured first key tenant for Houston Spaceport's phase one. (Agreement is now being finalized)

CREATING OPPORTUNITIES

CURRENT FACILITIES

Phase 1 Began In Earnest Last Year with the Opening of the Houston Aerospace Support Center (HASC).



Now, Phase 1 Expansion Continues with Custom Leasing Opportunities...

Virgin Galactic is Making Commercial Spaceflight a Reality



PARTNERSHIPS WITH KEY UNIVERSITIES



PARTNERING WITH KEY UNIVERSITIES AND INSTITUTIONS IS INTEGRAL TO OUR LONG-TERM VISION OF COMMERCIAL AEROSPACE LEADERSHIP.

- For our tenants, it means the ability to share ideas, personnel, best practices, equipment and office space with some of the nation's best colleges and universities.
- For universities, it means the ability to offer real-world application of the science and curriculum surrounding commercial spaceflight

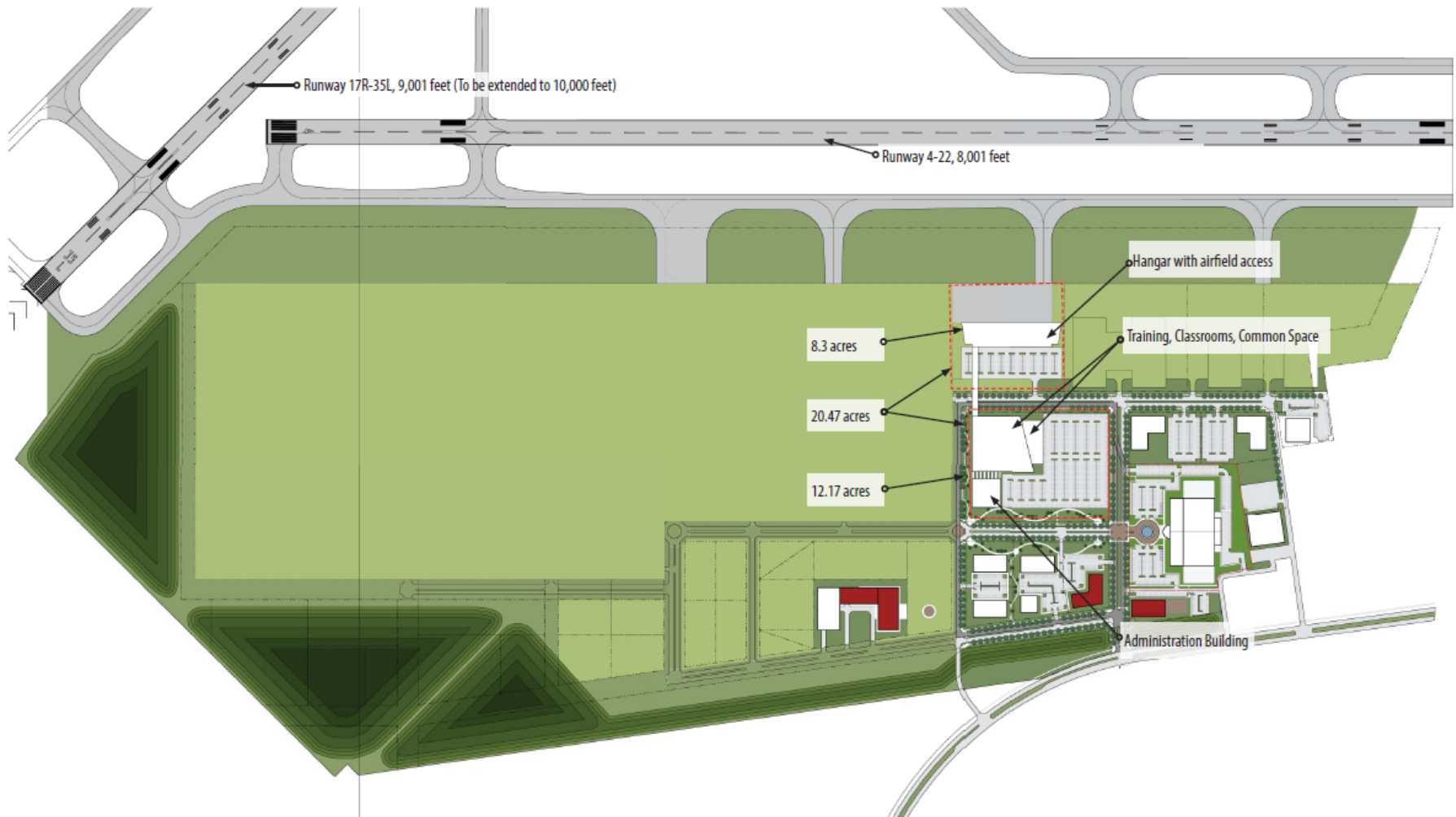
HIGHER EDUCATION AND TRAINING CENTER FUTURE SITE

FIGURE 1-1: Available Site



HIGHER EDUCATION AND TRAINING CENTER FUTURE SITE

FIGURE 1-1: Available Site



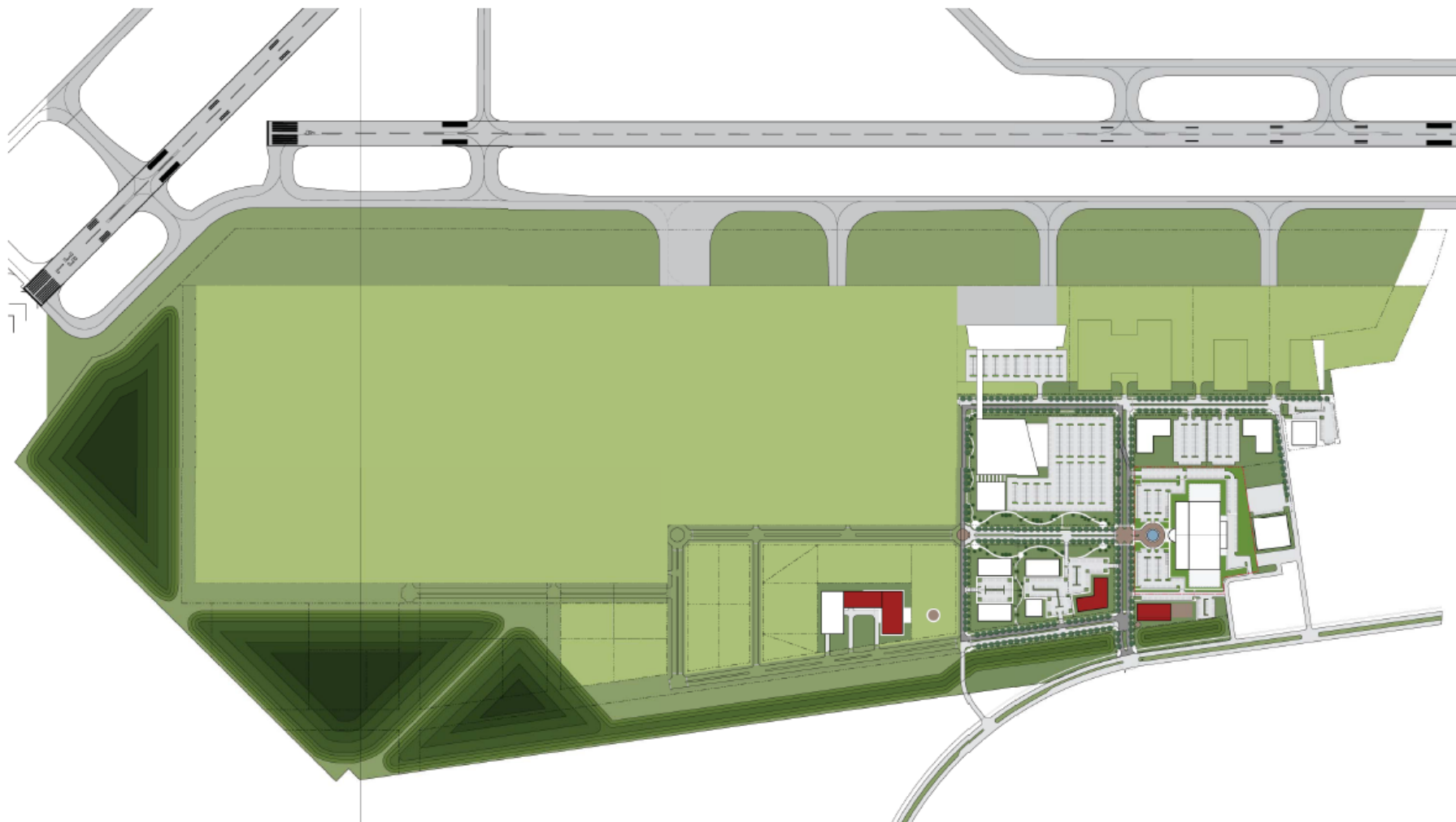
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FIGURE 1-1: Available Site



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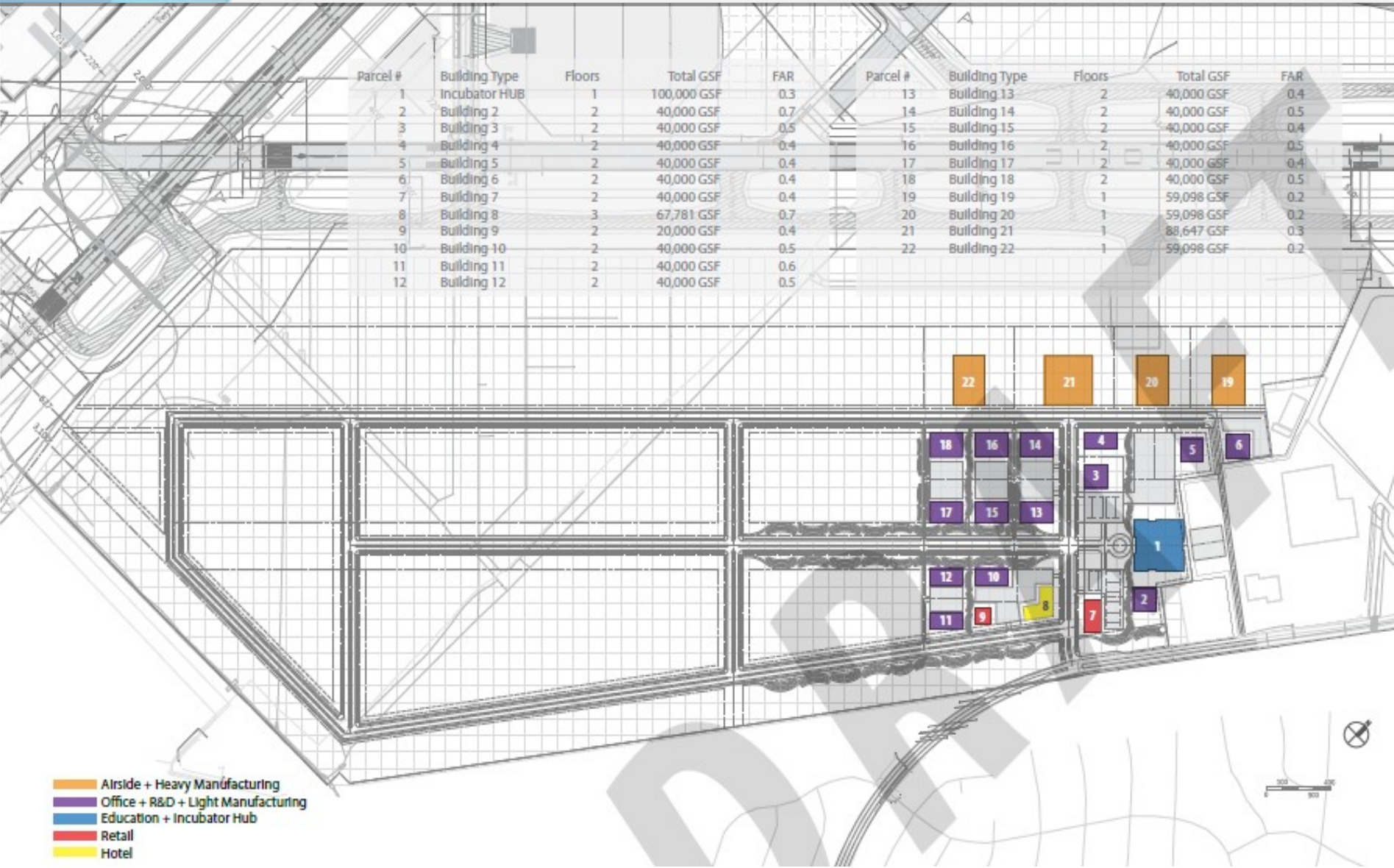


THANK YOU



PHASE 1 DEVELOPMENT CONCEPT PLAN

FUTURE FACILITIES



PHASE 1 DEVELOPMENT CONCEPT PLAN

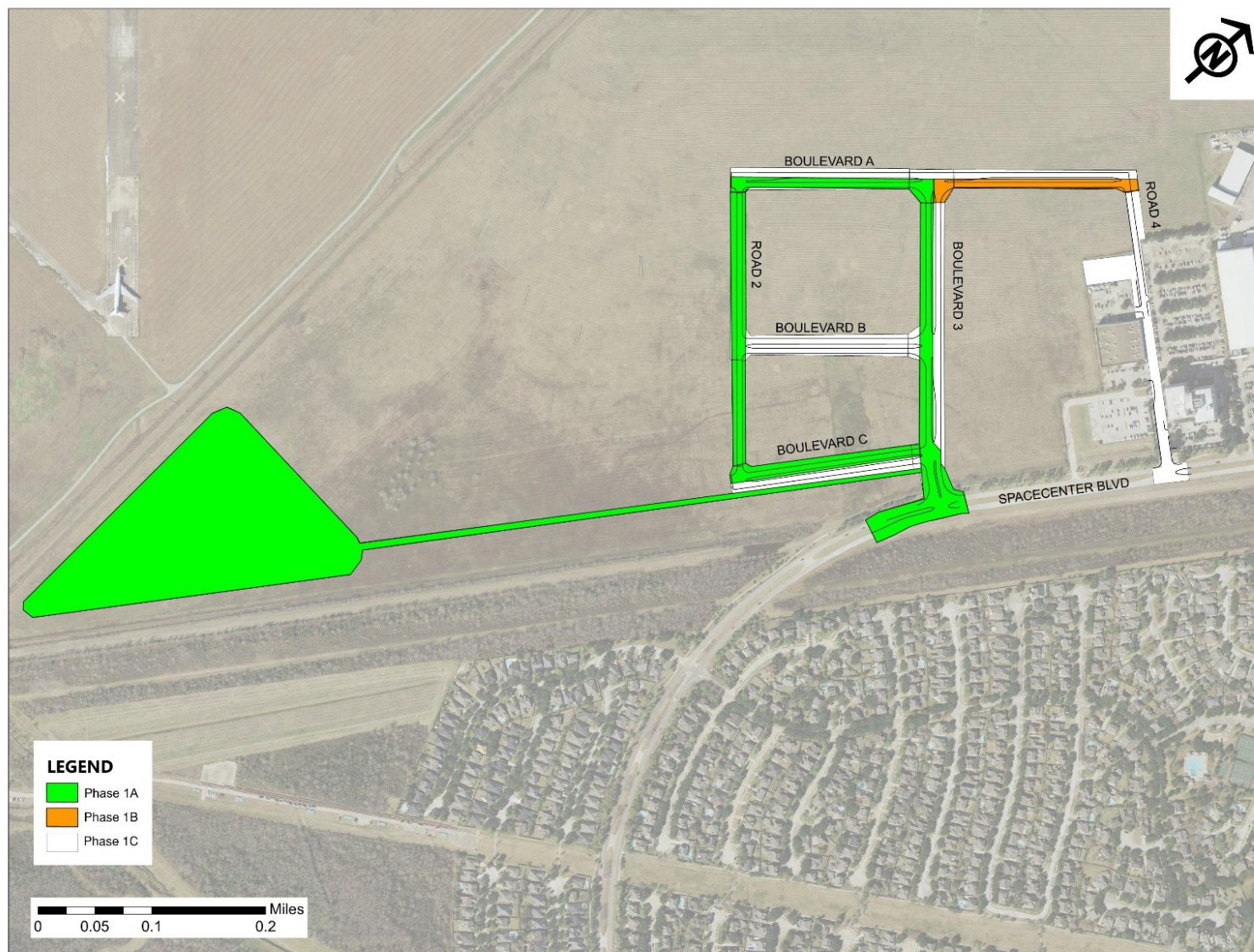
FUTURE FACILITIES



POTENTIAL PARCELIZATION PLAN



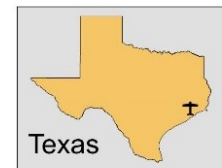
INFRASTRUCTURE PHASING



Ellington
Airport
(EFD)
Spaceport
Infrastructure

**REVISED
SPACEPORT**

Phase 1



REVISIONS

COMPLETED INFRASTRUCTURE AT ELLINGTON



The 130,000 square foot Lone Star Flight Museum that brings a range aviation endeavors to Ellington

CREATING OPPORTUNITIES FUTURE FACILITIES



THE NEW AIR TRAFFIC CONTROL TOWER is nearing completion.

- Dedicated Mission Control for Spaceflight Operators is the first of its kind in the United States.
- Supports our stated goal of leveraging infrastructure to add value for commercial tenants and partners.

CREATING OPPORTUNITIES FUTURE FACILITIES





CREATING OPPORTUNITIES

NEW SCHOLL ROAD



CREATING OPPORTUNITIES NEW PRIVATE HANGARS

